

Lepinisticus vignai, a new genus
and species of the family Cylisticidae
(Crustacea, Oniscoidea)

par

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With 4 figures

ABSTRACT

A second genus of the family Cylisticidae has been found in the Lepini Mts (Latium, central Italy): *Lepinisticus vignai* n. gen., n. sp. A diagnosis of the new genus and description (with figures) of the new species is given, together with a new diagnosis of the family and key to genera and subgenera.

Until now the family Cylisticidae Verhoeff, 1949 included only the genus *Cylisticus* Schnitzler, 1853, divided into three subgenera: *Cylisticus* s. str., synonymous with *Typhlisticus* Verhoeff, 1949 (VANDEL 1962, p. 556), *Parcylisticus* Verhoeff, 1943 and *Platycylisticus* Strouhal, 1971. *Cylisticus* s. str. contains approximately 56 species and subspecies which are found -with the exception of *C. convexus* (De Geer, 1778) widely distributed in Europe, Asia Minor, northern Africa and America- in two clearly separated areas: the Pontian Region and the lands encompassed by the north-west Mediterranean Sea. *Parcylisticus*, with seven forms, is found in the north-western part of Turkey and eastern Transcaucasus while *Platycylisticus* is known with only one species from Eregli, northern Turkey.

Among a small group of terrestrial isopods collected in the Lepini Mountains (Latium, central Italy)¹ were some specimens of Cylisticidae which belong to a new genus that we denominate as follows.

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Lepinisticus n. gen.

Diagnosis

Body colourless, eyes absent. *Noduli laterales* small, arranged more or less in a line; d/c co-ordinates with a maximum on pereon segment 5 but without any evident peak (Fig. 1). Body elongated with strongly convex back. Forms "imparfaitement volvationelles, type exoantenné" (sensu VANDEL) (Fig. 2). Cephalon and pereon segment 1 strongly modified. Cephalon with a deep central groove running longitudinally along the entire vertex; the anterior half of this groove is bisected by a thin blade which

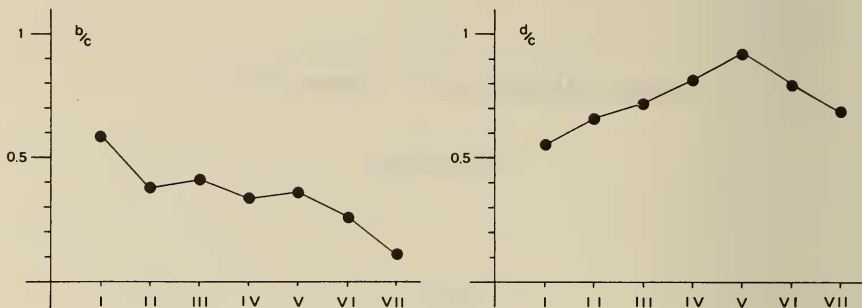


FIG. 1.

Lepinisticus vignai n. gen., n. sp., ♀: *noduli laterales* b/c and d/c co-ordinates.

protrudes forward and above the vertex. Pereon segment 1: the cephalic groove continues on the pereon tergite 1 with a depression which diminishes in depth from front to back where it disappears in the posterior third. When the animal rolls up the antennal peduncles are inserted parallelly in the groove of cephalon and pereon tergite 1, while the flagella do not fit in this groove and are directed obliquely outwards. Pereon segments 2-7, pleon, telson and appendices as in the genus *Cylisticus*.

Etymology

The generic name refers to the collecting site in the Lepini Mountains (Latium).

Type-species: *Lepinisticus vignai* n. sp.

Lepinisticus vignai n. sp.

Material examined

Monti Lepini (Lazio), M. Semprevisa, 1,200 m: 2 ♂♂, 8 ♀♀ (2 ovig.), 6.VI.1975, A. Vigna Taglianti leg.; 5 ♀♀ (1 ovig.), 19.VI.1980, C. Manicastro, R. Argano et F. Gravina leg.; 1 ♀ ovig., 25.VI.1980, S. Taiti leg.

The ♂ holotype and 7 paratypes are deposited in the Argano Collection (Zoological Museum of the University, Rome); 5 paratypes in the Museum of Natural History, Genève; 2 paratypes in the Zoological Museum "La Specola", Florence and 1 paratype in the Staatliches Museum für Naturkunde, Stuttgart.

Description

Maximum length: ♂, 7 mm; ♀ ovig., 8 mm. Back slightly wrinkled with sparse tiny triangular scale-spines. *Noduli laterales* with b/c and d/c co-ordinates as in Fig. 1. Cephalon (Fig. 3a-c): in addition to the above mentioned characters, it has rectangular frontal lateral lobes which do not protrude forward. Pereon segment 1 (Fig. 3b) with posterior margin deeply excavated at the base of epimera; posterior angle acute. Pleon with segment 5 epimera convergent. Telson (Fig. 3d) triangular, with distal part protruding slightly with respect to the uropod protopodites; subacute apex. Antenna: second joint of flagellum 2 (♀) or 2.5 (♂) times longer than the first one. Uropod: posterior margin of protopodite straight.

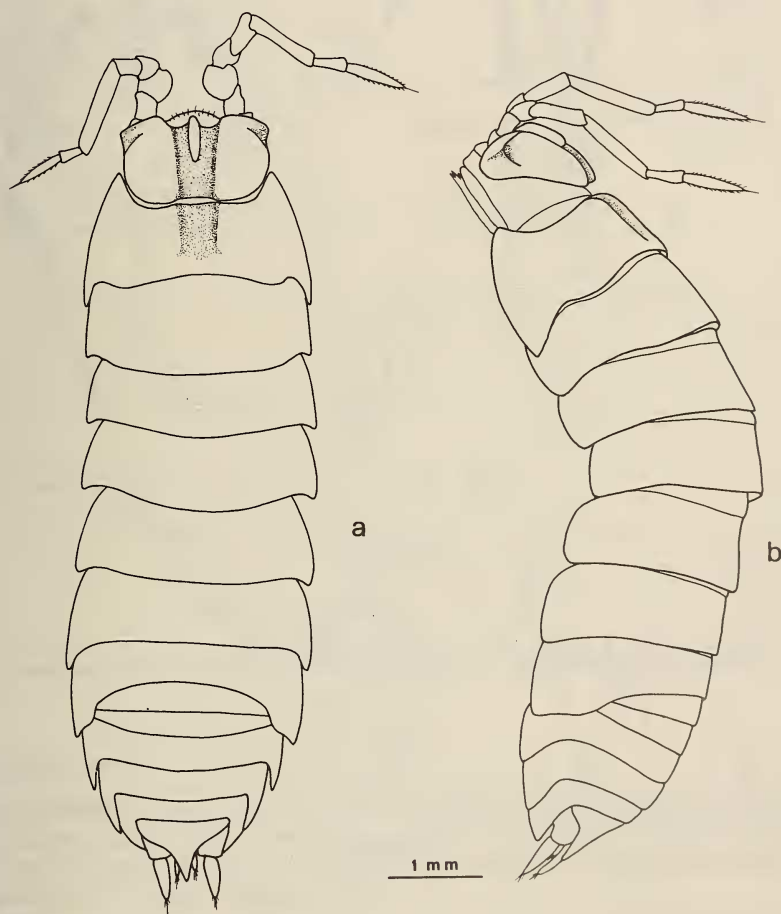


FIG. 2.

Lepinisticus vignai n. gen., n. sp., ♀: a) entire animal in dorsal view;
b) entire animal in lateral view.

Male sexual characters: Pereopods 1-4 with a brush of spines on carpus. Pereopod 7 (Fig. 4a): ischium with a straight sternal margin and a spinose area in the distal third; merus with a small setose area at the base. Pleopod 1: exopodite (Fig. 4b) with a long posterior point, rounded apex. As the endopodites of the holotype are damaged we have represented the endopodite of the ♂ paratype, 3.5 mm long (Fig. 4c). Pleopod 2 (Fig. 4d): styliform endopodite clearly longer than exopodite.

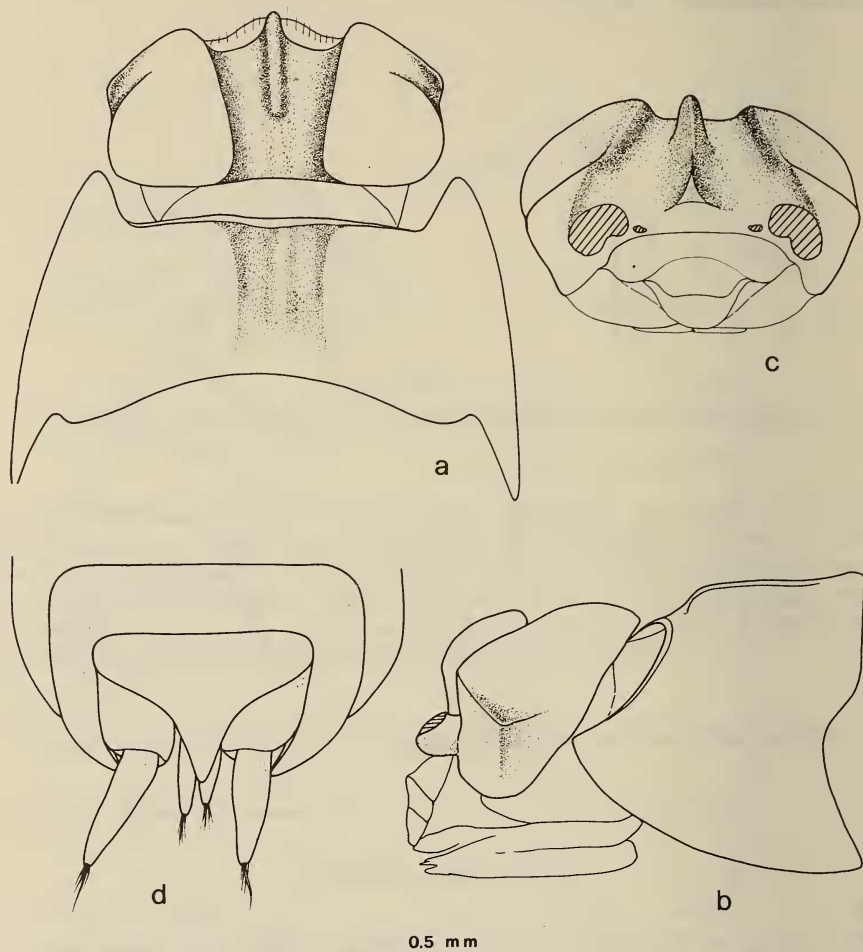


FIG. 3.

Lepinisticus vignai n. gen., n. sp., ♀: a) cephalon and pereon segment 1 in dorsal view; b) cephalon and pereon segment 1 in lateral view; c) cephalon in frontal view; d) telson and uropods.

Etymology

The new species is named for Prof. Augusto Vigna Taglianti (Institute of Zoology, University of Rome) who first collected specimens of this interesting isopod.

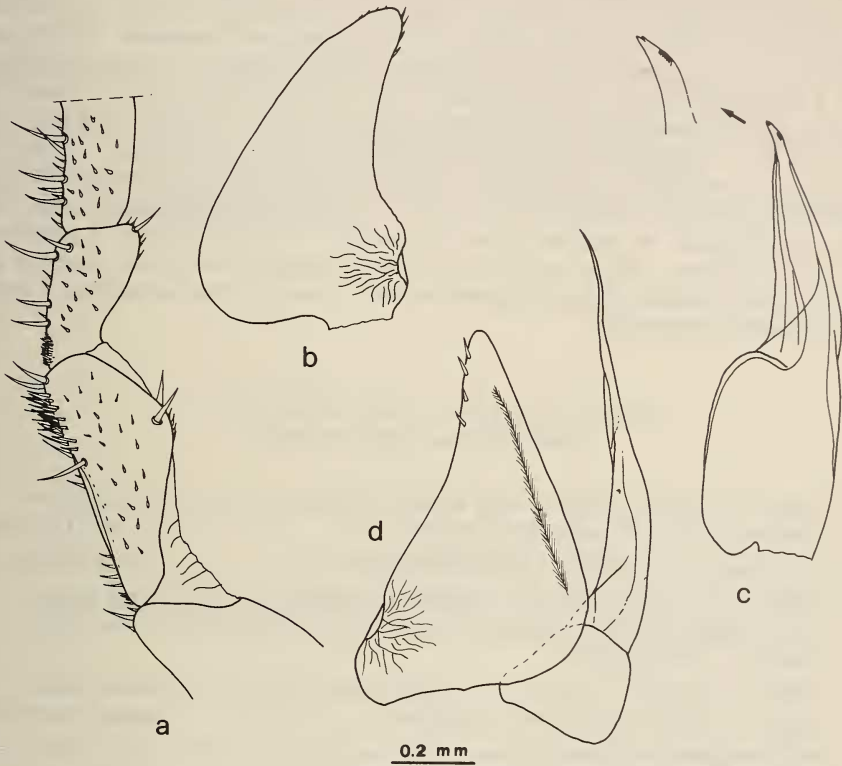


FIG. 4.

Lepinisticus vignai n. gen., n. sp., ♂:

a) pereopod 7; b) pleopod 1 exopodite; c) pleopod 1 endopodite, juv.; d) pleopod 2.

Ecology

The specimens were collected on the north side of Mt Semprevisa (Lepini Mts), in a large beech grove with a mesophilous ground cover, under big stones entrenched to a depth of about one meter. Both for its morphology and habitat this species must be considered as a typical endogenous form.

Remarks

The genus *Lepinisticus* differs from the closely related *Cylisticus* by the marked grooves on its cephalon and pereon segment 1 which receive the antennae when the animals roll into a ball. The new genus is akin to the *nasutus*-group (cfr. FERRARA &

TAITI 1978, TAITI & MANICASTRI 1980 and TAITI & FERRARA 1980) in the position of the *noduli laterales*, complete body depigmentation, reduction or absence of eyes, and endogenous habits. Most of the species of this group have a very limited distribution with a large number of endemisms.

With the institution of this new genus the diagnosis of the family Cylisticidae must be modified as follows:

Animals capable of rolling into an imperfect ball, exantennate type. Body generally strongly convex (except in the subgen. *Platycylisticus*) and lengthened. Gland pores distributed over the whole surface of the tergites. *Noduli laterales* b/c and d/c co-ordinates with a maximum more or less accentuated on pereon segment 4 or 5. Cephalon and pereon segment 1 without any modification (gen. *Cylisticus*) or with groove-like modifications which accept the antennae when rolled up (gen. *Lepinisticus*). Telson and uropods not modified for conglobation. Cephalon: medial frontal lobe generally triangular and continuing on the profrons in a more or less protruding carena; lateral lobes large, quadrangular or rounded. Posterior margin of pereon segment 1 concave at the base of epimera. Telson with long, distinct, triangular distal part. Antenna with a two-jointed flagellum. Pleopod exopodites with 5 pairs of pseudotracheae. Uropods with exopodites lengthened.

KEY TO GENERA AND SUBGENERA (after STROUHAL 1971, modified)

- 1 Vertex and pereon tergite 1 with a deep longitudinal groove in which the antennae fit when the animal is rolled up gen. *Lepinisticus*
- Vertex and pereon tergite 1 without any groove gen. *Cylisticus* 2
- 2 Median frontal lobe generally triangular (sometimes missing); tergal granulations usually absent or feebly present on the anterior part of the body, especially on the epimera 3
- Median frontal lobe in form of a sharp tooth, vertically protruding above vertex; the whole back densely granulated subgen. *Parcylisticus*
- 3 Body elongated with parallel sides, more than twice as long as broad; back strongly convex with almost vertical epimera subgen. *Cylisticus*
- Body large and oval, about 1.5 as long as broad; back slightly convex with oblique epimera subgen. *Platycylisticus*

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RÉSUMÉ

Description de *Lepinisticus vignai*, nouveau genre et nouvelle espèce de la famille des Cylisticidae (Crustacea, Oniscoidea), recueilli dans les Monti Lepini en Latium (Italie centrale). On donne une nouvelle diagnose de la famille et un tableau de détermination des genres et des sous-genres.

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